



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/949,850	10/14/97	SOLANKI	D 356952000100

CHARLES D. HOLLAND
MORRISON & FOERSTER
755 PAGE MILL ROAD
PALO ALTO CA 94304-1018

MM12/1229

EXAMINER

NGO, H

ART UNIT

PAPER NUMBER

2831

DATE MAILED:

12/29/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/949,850

Applicant(s)

Solanki et al

Examiner

Hung V Ngo

Group Art Unit
2831



☒ Responsive to communication(s) filed on Sep 29, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 23-44 is/are pending in the application.

Of the above, claim(s) 36-44 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 23-35 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2831

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US 4, 655, 088) in view of Takahashi et al

Adams discloses a housing (10) formed of a polymer material (col 1, line 55-60) having walls (12) (re claims 32, 33), a chamber, a cap (24) and a vent hole (25, 14), multiple leads (13) being partially exposed with the chamber (re claim 30), a wire (23) (re claim 25) (re claim 27), a pressure transducer (20), and recites "the portion of leads 13 which penetrate into the area where semiconductor die 20 is mounted is preferably covered with a passivation material as is semiconductor die 20 in order to protect the lead frames and the die from moisture, and other environmental components" (col 2, lines 20-26), wherein this meets the limitation of "the chamber is filled with a pressure transfer medium" (re claims 26), but do not disclose a metal base (re claim 23) formed a ground lead (re claims 24, 29), and the walls extended about the base to

Art Unit: 2831

expose only a portion of the base (re claim 28), the pressure transfer medium comprising silicone gel (re claim 31), molding a polymer housing and heating the lead having the downset portion (re claims 34, 35).

Takahashi et al disclose a metal base (7) of a lead frame for supporting a pressure transducer (col 3, lines 44-45) and the walls extended about the base to expose only a portion of the base (Fig 7) for the purpose of supporting the pressure transducer and reducing thermal stress (abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the exposed metal base with the housing of Adams for the purpose of supporting the pressure transducer and reducing thermal stress as taught by Takahashi et al.

It is a common practice in the electrical art to connect the metal base to a ground lead. It would have been obvious to one having ordinary skill in the art at the time the invention was made to connect the metal base to the ground lead of the modified Adams for the purpose of providing a ground terminal for connecting the transducer to external ground and for cooling the device in the housing.

Silicone gel is a well known pressure transfer medium or encapsulating material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Silicone gel for the pressure transfer medium of Adams, since Silicone gel is known pressure transfer medium the substitution would not alter the function of the package of Adams

The limitations of molding a polymer housing and heating the lead having the downset portion have been considered. However, the presence of process limitations in product claims,

Art Unit: 2831

which product does not otherwise patentably distinguish over prior art, cannot impart patentability to that product. In re Stephens 145 USPQ 656 (CCPA 1965).

Response to Arguments

Applicant's arguments filed 09-29-99 have been fully considered but they are not persuasive.

Applicant argues (1) that Nothing in either of the Adams or Takahashi et al references indicates that it is desirable to e.g. eliminate the wiring required in Takahashi et al by providing a lead that also forms the base upon which the transducer is mounted (2) the references do not provide all elements as claimed, (3) that the methods are sufficiently different that one of ordinary skill in this art would not have a reason to insert the metal die pad of Takahashi et al into Adams' device (4) that the Office Action has not indicated what the motivation is to combine the Adams and Takahashi et al references and the motivation to form the metal die pad as part of lead, (5) that the Office Actions have not established reasons why the subject matter of one set of claims is patentably distinct from the subject matter of another set of claims. The examiner disagrees. With respect to (1), the office action recites "It is a common practice in the electrical art to connect the metal base to a ground lead". Also the examiner provides a reference to support this feature (see Gagnon et al US 5,289,344). With respect to (2) all elements have been addressed in previous paragraphs. With respect to (3) and (4), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the

Art Unit: 2831

references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine Adams and Takahashi et al for the rejection is found in the reference (abstract of Takahashi et al) and motivation to form the metal die pad as part of lead is for providing a ground terminal for connecting the transducer to external ground and for cooling the transducer in the housing, and this knowledge is generally available to one of ordinary skill in the art (see Gagnon et al US 5,289,344, abstract). With respect to (5), the subject matter of one set of claims is patentably distinct from the subject matter of another set of claims because species I (Figs 1, 2) is one embodiment and species II (Figs 5a-5c) is another distinct embodiment. However should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 2831

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung V. Ngo whose telephone number is (703) 308-7614. The examiner can normally be reached on Monday to Friday from 8:00 am to 05:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid, can be reached on (703) 308-0640.

The fax phone number for this Group is (703) 305-3431 or (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Kristine Kincaid
Kristine Kincaid
Supervisory Patent Examiner
Technology Center 2800

HVN

December 13, 1999